IN THE CLAIMS

Please amend claims 15, 16, 18-23 as follows:

1. (Withdrawn) A method of treating Down Syndrome in a fetus by identifying and treating abnormal levels of a plurality of metabolites in a specimen of bodily fluid having metabolites from a patient, comprising:

obtaining a patient profile of all of the metabolites contained in the specimen by measuring the level of each of the metabolites in the specimen, wherein the patient profile comprises the level of each respective metabolite,

generating a control profile of the metabolites contained in the specimen, wherein the control profile comprises the level for normal patients of each respective metabolite in the patient profile, wherein the normal patients comprise patients who do not have Down Syndrome,

comparing the patient profile with the control profile by identifying each of the metabolites of the patient profile having a different level in comparison with the level of that metabolite for the control profile in order to identify a plurality of metabolites having different levels, wherein the comparing step comprises:

determining if a formiminoglutamic acid level of the patient profile is less than a formiminoglutamic acid level of the control profile to analyze a level of mono-carbon in the patient profile relative to a level of mono-carbon in the control profile,

determining if a homocysteine level of the patient profile is increased relative to a homocysteine level of the control profile to analyze the level of homocysteine in the patient profile,

determining if a normetanephrine level of the patient profile is increased relative to a normetanephrine level of the control profile to analyze the level of normetanephrine in the patient profile,

determining if an oxalic acid level of the patient profile is decreased relative to an oxalic acid level of the control profile to analyze a level of vitamin B6 in the patient profile relative to a level of vitamin B6 in the control profile,

determining if a serine level of the patient profile is decreased relative to a serine level of the control profile to analyze the level of serine in the patient profile, and

determining if a tetra-hydro-biopterin level of the patient profile is decreased relative to a tetra-hydro-biopterin level of the control profile to analyze the level of tetra-hydro-biopterin in the patient profile, and

prescribing a supplement for each respective metabolite of the plurality of metabolites of the patient profile having a different level when compared with the level of that metabolite for the control profile, wherein the supplement restores the level of the metabolite of the patient profile to the level of that metabolite for the control profile, and wherein the plurality of metabolites of the patient profile having different levels in comparison to the control profile identify a presence of Down Syndrome.

2-14. (Cancelled)

15. (Currently Amended) A method of identifying ~~Down Syndrome~~ abnormal metabolite in a fetus and comparing to a metabolic profile of Down Syndrome, comprising:

a) obtaining an amniotic fluid specimen by placing a syringe having a needle into a uterus and withdrawing the amniotic fluid specimen via the needle,

b) identifying a quantity for each metabolite that is present in the amniotic fluid specimen using a gas chromatograph/mass spectrometer,

c) compiling a profile of the amniotic fluid specimen that lists each metabolite and the quantity for each metabolite,

d) comparing the amniotic fluid specimen profile with a control profile representative of normal levels of each metabolite in amniotic fluid by comparing the quantity of each metabolite, ~~and~~

e) identifying a plurality of abnormal metabolite levels in the amniotic fluid specimen ~~the presence of Down Syndrome in the fetus~~ when the comparing step of step d) reveals that the profile of metabolites a pattern of the quantity of each metabolite in the amniotic fluid specimen compiled in step c) differs from the control profile~~.~~, and a pattern in the quantity of each metabolites in the control profile~~.~~, and

f) comparing the plurality of abnormal metabolite levels to the metabolic profile of Down Syndrome.

16. (Currently Amended) The method of claim 15, wherein the identifying step ~~control profile~~ comprises revealing that a metabolite selected from the group consisting of: formiminoglutamate, normetanephrine, homocysteine, oxalic acid, serine, and tetra-hydro-biopterin and combinations thereof in the amniotic fluid specimen differs in quantity from the control profile.

17. (Withdrawn) The method of claim 15, further comprising prescribing a supplement for each respective metabolite of the subset of metabolites of the patient profile having a different quantity when compared with the quantity of that metabolite for the control profile, wherein the supplement restores the quantity of the metabolite of the patient profile to substantially the quantity of that metabolite for the control profile.

18. (Currently Amended) The method of claim 16 ~~15~~, wherein the quantity for each metabolite listed by the control profile comprises a mean level.

19. (Currently Amended) The method of claim 16 ~~15~~, wherein the quantity for each metabolite listed by the control profile comprises a median level.

20. (Currently Amended) The method of claim 16 ~~15~~, further comprising, after the obtaining an amniotic fluid specimen step, storing the amniotic fluid specimen at around -20° C.

21. (Currently Amended) A method of identifying abnormal metabolites in a fetus, comprising:

obtaining an amniotic fluid specimen by placing a needle into a uterus and withdrawing the amniotic fluid specimen via the needle,

identifying a quantity for each metabolite that is present in the amniotic fluid specimen by analyzing the amniotic fluid specimen using a gas chromatograph/mass spectrometer,

compiling a profile of the amniotic fluid specimen, wherein the profile lists each metabolite and the quantity for each respective metabolite present in the amniotic fluid specimen,

obtaining a control profile, wherein the control profile lists a quantity for each metabolite present in the amniotic fluid specimen for a control population without Down Syndrome,

identifying a plurality of abnormal quantities of metabolites of the profile of the amniotic fluid specimen by comparing the quantity of each metabolite with the quantity for that respective metabolite of the control profile, and

~~identifying the presence of Down Syndrome in the fetus based on~~ comparing the identified plurality of abnormal quantities of metabolites ~~the quantity of each metabolite in the control profile~~ to a metabolic profile of Down Syndrome.

22. (Currently Amended) The method of claim 21, wherein the step of identifying a plurality of abnormal quantities of metabolites comprises identifying decreased concentration of formiminoglutamic acid, increased concentration of homocysteine, increased concentration of normetanephrine, decreased concentration of oxalic acid, decreased concentration of serine, and decreased concentration of tetra-hydro-biopterin and combinations ~~concentrations~~ thereof.

23. (Currently Amended) The method of claim 21, wherein the step of identifying a plurality of abnormal quantities of metabolites is comprised of identifying at least two abnormal quantities chosen from the group consisting of decreased concentration of formiminoglutamic acid, increased concentration of homocysteine, increased concentration of normetanephrine,

decreased concentration of oxalic acid, decreased concentration of serine, and decreased concentration of tetra-hydro-biopterin and combinations ~~concentrations~~ thereof.

24. (Previously Presented ) The method of claim 15, wherein the step of identifying the quantity of each metabolite comprises identifying the quantity of formiminoglutumate and oxalic acid.